Machine Learning

-- This is your Cortex Project.

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-- SETUP

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use role ACCOUNTADMIN;

use warehouse TINY\_WAREHOUSE\_MG;

use database CRIME;

use schema CRIMES;

-- Inspect the first 10 rows of your training data. This is the data we'll

-- use to create your model.

select \* from CHICAGO limit 10;

-- Inspect the first 10 rows of your prediction data. This is the data the model

-- will use to generate predictions.

select \* from CHICAGO limit 10;

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-- CREATE PREDICTIONS

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-- Create your model.

CREATE OR REPLACE SNOWFLAKE.ML.CLASSIFICATION my\_model(

INPUT\_DATA => SYSTEM$REFERENCE('TABLE', 'CHICAGO'),

TARGET\_COLNAME => 'ARREST',

CONFIG\_OBJECT => { 'ON\_ERROR': 'SKIP' }

);

-- Inspect your logs to ensure training completed successfully.

CALL my\_model!SHOW\_TRAINING\_LOGS();

-- Generate predictions as new columns in to your prediction table.

CREATE TABLE chicago\_pred AS SELECT

\*,

my\_model!PREDICT(

OBJECT\_CONSTRUCT(\*),

-- This option alows the prediction process to complete even if individual rows must be skipped.

{'ON\_ERROR': 'SKIP'}

) as predictions

from CHICAGO;

-- View your predictions.

SELECT \* FROM chicago\_pred;

-- Parse the prediction results into separate columns.

-- Note: This is a just an example. Be sure to update this to reflect

-- the classes in your dataset.

SELECT \* EXCLUDE predictions,

predictions:class AS class,

round(predictions['probability'][class], 3) as probability

FROM chicago\_pred;

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-- INSPECT RESULTS

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-- Inspect your model's evaluation metrics.

CALL my\_model!SHOW\_EVALUATION\_METRICS();

CALL my\_model!SHOW\_GLOBAL\_EVALUATION\_METRICS();

CALL my\_model!SHOW\_CONFUSION\_MATRIX();

-- Inspect the relative importance of your features, including auto-generated features.

CALL my\_model!SHOW\_FEATURE\_IMPORTANCE();